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International Bureau



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WO 01/75108 A1

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- (74) Agents: ISHIMOTO, Lance, K. et al.; Lexicon Genetics Incorporated, 4000 Research Forest Drive, The Woodlands, TX 77381 (US).
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60/194,255 3 April 2000 (03.04.2000) US
- (71) Applicant: LEXICON GENETICS INCORPORATED
[US/US]; 4000 Research Forest Drive, The Woodlands, TX 77381 (US).
- (72) Inventors: HU, Yi; 333 Holly Creek Ct. #203, The Woodlands, TX 77381 (US). KIEKE, James, Alvin; 9202 Restover Lane, Houston, TX 77064 (US). TURNER, Alexander, C., Jr.; 67 Winter Wheat Place, The Woodlands, TX 77381 (US). NEHLS, Michael, C.; Paul-Keller-Strasse 6, 82131 Stockdorf (DE). FRIEDRICH, Glenn; c/o Breland & Breland, 2207 Hermann Drive, Houston, TX 77004 (US). ZAMBROW-ICZ, Brian; 18 Firethorne Place, The Woodlands, TX 77382 (US). SANDS, Arthur, T.; 163 Bristol Bend Circle, The Woodlands, TX 77382 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SI, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
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WO 01/75108 A1

(54) Title: HUMAN ION CHANNEL PROTEIN AND POLYNUCLEOTIDES ENCODING THE SAME

(57) Abstract: Human polynucleotide and polypeptide sequences are disclosed that can be used in therapeutic, diagnostic, and pharmacogenomic applications.

SEQUENCE LISTING

<110> LEXICON GENETICS INCORPORATED

<120> Novel Human Ion Channel Protein and
Polynucleotides Encoding the Same

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<150> US 60/194,255

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/10875

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N15/12 C07K14/705

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	WO 00 77035 A (NEUROSEARCH AS) 21 December 2000 (2000-12-21) the whole document ---	1-4
X,P	WO 00 61606 A (METZKER MICHAEL L ;CASKEY C THOMAS (US); LI WEN (US); MERCK & CO I) 19 October 2000 (2000-10-19) the whole document --- -/-	1-4

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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- *E* earlier document but published on or after the international filing date
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- *G* document member of the same patent family

Date of the actual completion of the international search

2 August 2001

Date of mailing of the international search report

16/08/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Aslund, J

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/10875

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	SCHROEDER B C ET AL: "KCNQ5, a novel potassium channel broadly expressed in brain, mediates M-type currents" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 275, no. 31, 4 August 2000 (2000-08-04), pages 24089-24095, XP002169158 ISSN: 0021-9258 the whole document	1-4
X,P	LERCHE C ET AL: "Molecular cloning and functional expression of KCNQ5, a potassium channel subunit that may contribute to neuronal M-current diversity" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 275, no. 29, 21 July 2000 (2000-07-21), pages 22395-22400, XP002169157 ISSN: 0021-9258 the whole document	1-4
X	KUBISCH CHRISTIAN ET AL: "KCNQ4, a novel potassium channel expressed in sensory outer hair cells, is mutated in dominant deafness." CELL, vol. 96, no. 3, 5 February 1999 (1999-02-05), pages 437-446, XP002173745 ISSN: 0092-8674	4
A	figure 1	1-4
X	DATABASE EMBL 'Online! AW049888 (mus musculus EST), 4 March 2000 (2000-03-04) XP002173772 nucleotides 261-304, 415-445	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/10875

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0077035	A	21-12-2000	AU 4911000 A	02-01-2001
WO 0061606	A	19-10-2000	NONE	